The 2019 K-State Swine Profitability Conference is scheduled for Tuesday, February 5, at the Stanley Stout Center, Manhattan, KS. The program will include:

- 9:15 a.m. Coffee and Donuts
- 9:30 a.m. Welcome
- 9:45 a.m. International Trade and Market Outlook
  
  Dr. Lee Schulz, Ag Economist, Iowa State University

- 10:30 a.m. Growth of the Carthage System in Kansas
  
  Dr. Clayton Johnson, Veterinarian, Carthage Veterinary Service

- 11:15 a.m. Raising Pigs and Cattle on the High Plains
  
  Grant Morgan, Poky Feeders, Inc.

- 12:00 noon Lunch

- 1:15 p.m. Achieving High Production in Swine Dense Areas
  
  Dr. Noel Williams, COO, Iowa Select Farms

- 2:00 p.m. Bright Future of the U.S. Swine Industry
  
  Bill Even, CEO, National Pork Board

- 3:00 p.m. Adjourn

Pre-registration fee is $25 per participant by January 26; registration at the door is $50 per participant.

The complete schedule and online registration information can be found at www.KSUswine.org. For more information, contact Lois at lschrein@ksu.edu or 785-532-1267.

K-State’s Winter Ranch Management Series Set for February - Strategies to mitigate environmental factors impacting reproduction is the theme of the 2019 Kansas State University Winter Ranch Management Seminar Series. Hosted at four sites across the state of Kansas, the meetings will feature presentations and comments by extension educators on profit-enhancing strategies. The meetings will also feature a popular ‘town-hall’ style, question-and-answer session between Kansas cattle producers and extension specialists.

Topics to be discussed are environmental factors affecting conception rates and forage quality and availability impacts on beef cow nutrition during late gestation and pre-breeding.

Meeting times and registration fees vary by location, but all will include a meal. Participants are asked to RSVP for a selected location by the close of business one week prior to the event. Interested participants should contact their local host contact for registration and RSVP details.

- Tuesday, February 5: 5:30-8:30 p.m. – Minneapolis Grade School, 312 Delia Ave., Minneapolis
- Tuesday, February 19: 12:00–3:30 p.m. – Hodgeman County 4H Building, 1005 Atkin, Jetmore
- Tuesday, February 19: 5:30-8:30 p.m. – Township Hall, 220 Union Street, Rush Center
- Tuesday, February 26: 12:45-3:45 p.m. – McPherson Co Extension Office, 600 W Woodside, McPherson

More information about the K-State Winter Ranch Management Seminar Series is available at www.KSUBeef.org. For more information, contact Bob Weaber (bweaber@ksu.edu or 785-532-1460).
The **2018 KSU Dairy Days** will be hosted on Tuesday, February 5, in Whiteside, KS, and Thursday, February 7, in Seneca, KS. Dairy Days are hosted annually to update and inform dairy producers and allied industry on hot topics and findings from research projects relevant to the Kansas dairy industry. Key topics to be discussed include:

- **Dr. Gene Boomer, DVM** - “Managing ‘Gut Health’ for Healthier Cows and Higher Production”
- **Dr. Scott Dennis** - “Should You Consider Fiber and Starch Digestibility When Selecting a Silage Hybrid?”
- **Dr. Mike Brouk, PhD** - “Using Robots to Milk Cows”
- **Ms. Gretchen Raybuck, DFA Commodity Risk Management Analyst** - “Risk Management Options for Dairy Producers”
- **Mr. Kevin Lager** - “Dairy-Beef Crosses in Increase Revenue”

The Kansas Dairy Commission is the lunch sponsor for both meetings and the Whiteside meeting will be hosted in conjunction with the Reno County DHIA Annual Meeting. Both days will begin at 9:45 a.m. and adjourn at 3 p.m.

People interested in attending are encouraged to pre-register. For the Seneca location call 785-336-2184 or e-mail jholthau@ksu.edu; Whiteside location call 620-662-2371 or e-mail darrenbusick@ksu.edu. More information can be found at [https://www.asi.k-state.edu/research-and-extension/dairy/dairy-days.html](https://www.asi.k-state.edu/research-and-extension/dairy/dairy-days.html), or contact Luis Mendonca at mendonca@ksu.edu or 785-532-2652.

The **SowBridge Breeding Herd Education Series** is designed for people involved in managing or caring for boars, sows, and/or their litters, including operation owners, employees, technicians, managers, and technical service providers. SowBridge is designed to improve the understanding and application of various tools and techniques involved in daily care of the breeding herd and piglets.

This year-long program is offered by subscription only with a January 15 deadline to ensure participants will receive materials for the first session on February 6, 2019. Before each session, participants receive a link to download the presentation and any additional information provided by the presenter. Participants call in for the audio portion of each session to listen to the presenter and while following the presentation file on their own computer or device. Sessions begin at 11:30 a.m. central time and last no more than an hour.

The SowBridge Series cost of $200 includes all 12 sessions and supporting materials. Additional subscriptions from same operation are half that cost. For a complete schedule and registration form, visit [www.KSUswine.org](http://www.KSUswine.org). For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

The **2019 PorkBridge Grow-Finish Education Series** enrollment is now available. The 14th year of the PorkBridge distance education series begins February 7, 2019. This low-tech program features topics important to those who work with grow-finish operations and are presented by recognized industry experts. Provided through the collaboration of 11 land grant universities with swine faculty and staff, PorkBridge reaches producers and industry professionals across the country and around the world through an every-other-month series of six sessions. 2019 dates include February 7; April 4; May 30; August 1; October 3; and December 5. Sessions are scheduled starting at 11:30 a.m. CST and last about 60 minutes.

The cost is $100 for the entire 2019 PorkBridge program year. Subscription deadline is January 15 to assure receipt of program materials in time for the first session on Feb. 7. For a complete schedule and registration form, visit [www.KSUswine.org](http://www.KSUswine.org). For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

**Make plans to attend Cattlemen’s Day 2019** — The 106th annual Cattlemen’s Day will be hosted Friday, March 1, 2019. The trade show and educational exhibits will open at 8 a.m. in Weber Arena.

Registration for KSU Cattlemen’s Day will be $20 per person in advance or $30 per person at the door. Morning refreshments and lunch are included with registration. A complete schedule will be coming soon to [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday) or call 785-532-1267.

If you are interested in exhibiting at Cattlemen’s Day or have any questions, please contact Dale Blasi (dblasi@ksu.edu; 785-532-5427) or Jim Drouillard (jdrouill@ksu.edu; 785-532-1204).

The **42nd Annual Legacy Bull and Heifer Sale** will be March 1, 2019, at 4 p.m. at the Stanley Stout Center. This year’s offering includes 34 feed-efficiency tested bulls — 20 Angus, eight Simmental and six Hereford; 25 registered females — 10 spring-calving cows and 15 fall-bred cows; 20 commercial heifers; and five AQHA ranch performance horses. Visit [www.asi.ksu.edu/bullsale](http://www.asi.ksu.edu/bullsale) for more information, including the sale catalog which will be available February 5.
**Junior Swine Producer Day** is scheduled for Saturday, March 9, 2019, in Weber Arena on the K-State campus in Manhattan. This one-day educational event is devoted to the selection and management of youth swine projects. All ages and knowledge levels are invited! K-State faculty members, graduate students, and guest speakers will cover topics including selection, meat science, ear notching, breeds, the state nomination process, herd health, nutrition, and showmanship. An optional instructor-led YQCA session will also be held at the conclusion of the program. The cost for junior swine producer day is $15/person, if registration is submitted by March 11, 2019, or $20/person after the early deadline. All attendees, including youth and adults, must register. All participants who sign up by March 11 will also receive a t-shirt. Families may register online at [http://bit.ly/ksuasiregister](http://bit.ly/ksuasiregister), or by downloading the flyer ([http://bit.ly/ksuproducerdays](http://bit.ly/ksuproducerdays)), completing the bottom portion of the flyer and mailing it, with payment, to the K-State Youth Livestock Program. Those who indicate they would like to participate in the optional YQCA certification will receive additional details and instructions via email in late March. The KSU Sheep & Meat Goat Center will also be hosting its annual sale following the junior day program. They are separate events, but the schedule will allow families who would like to attend both events to do so. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264, or Joel DeRouchey at jderouch@ksu.edu or 785-532-2280.

**Junior Meat Goat Producer Day** will be hosted on Saturday, March 30, 2019, in Weber Arena on the K-State campus in Manhattan. This one-day educational event is devoted to the selection and management of youth meat goat projects. All ages and knowledge levels are invited! K-State faculty members, graduate students, and guest speakers will cover topics including selection, meat science, nutrition, the state nomination process, herd health, reproduction, health and wellness, facilities and equipment, and showmanship. An optional instructor-led YQCA session will also be held at the conclusion of the program. The cost for junior meat goat producer day is $15/person, if registration is submitted by March 11, 2019, or $20/person after the early deadline. All attendees, including youth and adults, must register. All participants who sign up by March 11 will also receive a t-shirt. Families may register online at [http://bit.ly/ksuasiregister](http://bit.ly/ksuasiregister), or by downloading the flyer ([http://bit.ly/ksuproducerdays](http://bit.ly/ksuproducerdays)), completing the bottom portion of the flyer and mailing it, with payment, to the K-State Youth Livestock Program. Those who indicate they would like to participate in the optional YQCA certification will receive additional details and instructions via email in late March. The KSU Sheep & Meat Goat Center will also be hosting its annual sale following the junior day program. They are separate events, but the schedule will allow families who would like to attend both events to do so. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.

**K-State Animal Sciences Leadership Academy** - Kansas State University will host the K-State Animal Sciences Leadership Academy June 5-8, 2019, for young livestock industry leaders. This four-day event will focus on increasing young leaders’ knowledge of Kansans’ diverse livestock industry as well as building participant’s leadership skills. Students will stay in university housing with event staff for the duration of the event. Twenty high school students (current 9th-12th graders) will be selected to participate. The application deadline is April 1, 2019. For more information, please contact academy director, Sharon Breiner at sbreiner@ksu.edu.

**Kansas 4-H EID Livestock Tag Orders** - The deadline to order market beef tags was December 28, 2018. Small livestock tag orders need to be submitted to the K-State Youth Livestock Program by January 25, 2019. Tags may be ordered after the deadline but will be considered a special order and could incur additional costs. All market animals or commercial females that will be nominated for the 2019 Kansas State Fair Grand Drive and/or Kansas Junior Livestock Show (KJLS) must be tagged with an official Kansas 4-H EID tag. The order forms and other tagging resources may be found on the K-State Youth Livestock Program, under Kansas 4-H EID Tags ([https://www.asi.k-state.edu/research-and-extension/youth-programs/](https://www.asi.k-state.edu/research-and-extension/youth-programs/)). Payment must accompany the order form. Counties must designate an agent to be responsible for their tags, as well as keep records of the families in which each tag is applied to a project. For more information, contact Lexie Hayes as adhayes@ksu.edu or 785-532-1264.

**Sheep Scanning Certification School** will be April 10-12, 2019, at the KSU Sheep and Meat Goat Center. Kansas State University Animal Sciences and Industry and KSU Research and Extension, through sponsorship by the National Sheep Industry Improvement Center, are hosting this sheep scanning educational and certification school to increase the number of trained technicians available to sheep producers. Participants will receive educational material on sheep scanning and be shown methods of collecting loin-eye area and depth, back fat, and body wall thickness. Participants also will have the opportunity to become certified to collect ultrasound data for submission to the National Sheep Improvement Program. The registration fee is $200 and the school will be limited to 20 students. For more information, contact Alison Crane at 785-532-1672; arcrane@ksu.edu.
The 2019 **Kansas Wildlife Habitat Education Program (WHEP) Contest** for Kansas youth will be held on Thursday, May 2 in Manhattan. The ecoregion for contestants to study is Great Plains Grassland – Tallgrass/Mixed Prairie, which can be found in the WHEP manual online at [https://www.whep.org/national-whep-manual/](https://www.whep.org/national-whep-manual/). For more information, contact Charlie Lee (clee@k-state.edu or 785-532-5734).

Plan to attend the **42nd Annual Midwest Meat Processing Workshop** on May 3, 2019, at K-State. Join us at the workshop to see, hear, taste and ask questions as state award winners share their expertise and demonstrate the manufacturing techniques used to make award winning products. Mark your calendar and watch for more details coming soon. For more information, contact Liz Boyle (lboyle@ksu.edu; 785-532-1247).

**Developing and Implementing a HACCP Plan for Meat and Poultry Workshop** will be June 11-13, 2019, in Weber Hall, Kansas State University, Manhattan, KS. This three-day workshop uses curriculum recognized by the International HACCP Alliance for meat and poultry processors and is led by an International HACCP Alliance Lead Instructor. For more information, contact Dr. Liz Boyle (lboyle@ksu.edu; 785-532-1247).

**Local Youth Livestock Opportunities** - any county that has a youth livestock educational opportunity open to Kansas youth outside of the county is invited to share that information with Lexie Hayes (adhayes@ksu.edu). This includes spring shows, showmanship clinics, skillathons, field days, etc. These opportunities will be included on the youth livestock website.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 5, 2019</td>
<td>KSU Swine Profitability Conference</td>
<td>Manhattan</td>
</tr>
<tr>
<td>February 5, 2019</td>
<td>K-State Winter Ranch Management Conference</td>
<td>Minneapolis, KS</td>
</tr>
<tr>
<td>February 5, 2019</td>
<td>KSU Dairy Day</td>
<td>White Side, KS</td>
</tr>
<tr>
<td>February 6, 2019</td>
<td>SowBridge Breeding Herd Education Series</td>
<td></td>
</tr>
<tr>
<td>February 7, 2019</td>
<td>KSU Dairy Day</td>
<td></td>
</tr>
<tr>
<td>February 7, 2019</td>
<td>PorkBridge Grow-Finish Education Series</td>
<td>Seneca, KS</td>
</tr>
<tr>
<td>February 19, 2019</td>
<td>K-State Winter Ranch Management Conference</td>
<td>Jetmore, KS</td>
</tr>
<tr>
<td>February 19, 2019</td>
<td>K-State Winter Ranch Management Conference</td>
<td>Rush Center, KS</td>
</tr>
<tr>
<td>February 26, 2018</td>
<td>K-State Winter Ranch Management Conference</td>
<td>McPherson, KS</td>
</tr>
<tr>
<td>March 1, 2019</td>
<td>KSU Cattlemen’s Day</td>
<td>Manhattan</td>
</tr>
<tr>
<td>March 1, 2019</td>
<td>Legacy Bull and Heifer Sale</td>
<td>Manhattan</td>
</tr>
<tr>
<td>March 9, 2019</td>
<td>Junior Swine Producer Day</td>
<td>Manhattan</td>
</tr>
<tr>
<td>March 30, 2019</td>
<td>Junior Meat Goat Producer Day</td>
<td>Manhattan</td>
</tr>
<tr>
<td>April 1, 2019</td>
<td>Application Deadline for K-State Animal Sciences Leadership Academy</td>
<td></td>
</tr>
<tr>
<td>April 10-12, 2019</td>
<td>Sheep Scanning Certification School</td>
<td>Manhattan</td>
</tr>
<tr>
<td>May 2, 2019</td>
<td>Wildlife Habitat Education Program Contest</td>
<td>Manhattan</td>
</tr>
<tr>
<td>May 3, 2019</td>
<td>Midwest Meat Processing Workshop</td>
<td>Manhattan</td>
</tr>
<tr>
<td>June 11-13, 2019</td>
<td>HACCP Plan for Meat and Poultry Workshop</td>
<td>Manhattan</td>
</tr>
<tr>
<td>August 24-25, 2019</td>
<td>Kansas 4-H Livestock Sweepstakes</td>
<td>Manhattan</td>
</tr>
</tbody>
</table>
Management Minute – Justin Waggoner, Ph.D., Beef Systems Specialist

“What’s Your Mission?”

Have you ever given any thought to what your organization, farm, feedlot or operation is really about? Do you have a mission statement, a set of core values that you believe your organization or operation embodies? Previously, I used to think that mission statements and core value statements were idealistic and a waste of thought. However, my attitude has changed. These statements provide the organization with a foundation, a clear objective that serves to guide the organization as it makes decisions that hopefully move the organization forward into the future. Regardless of the size of the enterprise, putting some thought into what an organization or business is really about has value. These statements do not have to be long or dramatic. I recently visited a family livestock operation in which the sign on the front lawn (along a major highway) simply said “Our Family Feeding Yours.” This simple statement tells everyone that drives by that this is a family operation that is foremost engaged in the process of sustaining not only themselves but other people. So challenge yourself a bit and ask yourself, “Why do you (or your business) do what you do?” What is your mission?

For more information, contact Justin Waggoner at jwaggon@ksu.edu.

Feedlot Facts – Justin Waggoner, Ph.D., Beef Systems Specialist

“Supplementing Cows During Cold Weather”

The New Year often brings with it some of the coldest months of the year. Most cattle producers know and appreciate that cold weather increases nutrient requirements. However, the real question is what should producers feed or supplement when the wind blows and the mercury barely registers on the thermometer.

Cattle are most comfortable within the thermonutral zone when temperatures are neither too warm nor cold. During the winter months cattle experience cold stress anytime the effective ambient temperature, which takes into account wind chill, humidity, etc., drops below the lower critical temperature. The lower critical temperature is influenced by both environmental and animal factors including hair coat and tissue insulation (body condition). The table below lists the estimated lower critical temperatures of cattle in good body condition with different hair coats. In wet conditions cattle can begin experiencing cold stress at 59°F, which would be a relatively mild winter day. However, if cattle have time to develop a sufficient winter coat the estimated lower critical temperature under dry conditions is 18°F.

<table>
<thead>
<tr>
<th>Coat Condition</th>
<th>Critical Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet or summer coat</td>
<td>59°F</td>
</tr>
<tr>
<td>Dry fall coat</td>
<td>45°F</td>
</tr>
<tr>
<td>Dry winter coat</td>
<td>32°F</td>
</tr>
<tr>
<td>Dry heavy winter coat</td>
<td>18°F</td>
</tr>
</tbody>
</table>

Cold stress increases maintenance energy requirements but does not impact protein, mineral or vitamin requirements. The general rule of thumb (for a cow in good body condition, BCS = 5 or greater) is to increase the energy density of the ration by 1% for each degree (Fahrenheit) below the lower critical temperature. The classic response to cold stress in confinement situations is an increase in voluntary intake. However, it has been documented that grazing beef cows may spend less time grazing as temperatures decline below freezing, which reduces forage intake, and makes the challenge of meeting the cow’s nutrient requirements even greater. In many cases, feeding a greater amount of low-quality hay will replace grazed forages but may not provide sufficient energy. Therefore providing additional energy by feeding a relatively higher-quality hay or fiber-based supplement (DDGS, Corn gluten feed, or Soybean Hulls) may be required. If fiber-based energy sources are not available, small amounts (2-3 lbs) starch-based concentrates may also be used as energy supplements.

For more information, contact Justin Waggoner at jwaggon@ksu.edu.
The Department of Animal Sciences and Industry at Kansas State University seeks nominations and applications for the position of **Head, Department of Animal Sciences and Industry**. This is a 12-month position with competitive salary commensurate with qualifications and experience. The successful candidate must have credentials for appointment as a tenured, full professor. Position available June 1, 2019, or later as negotiated. Review of applications begins February 15, 2019, and continues until position is filled. For more information, contact Dr. Don Boggs, Search Committee Chair, at dboggs@k-state.edu or 785-532-6151. Nominations should be sent to ASI Department Head Search at ddoan@k-state.edu. For position announcement, go to https://www.ag.k-state.edu/employment/index.html. To apply, go to http://careers.k-state.edu/cw/en-us/job/505384/department-head-animal-sciences-and-industry.

**Syngenta Enhanced Feed Corn (Enogen) Containing an Alpha Amylase Expression Trait Improves Feed Efficiency in Growing Calf Diets** - The objective of this study was to determine the response of growing calves when fed Enogen Feed (Syngenta) corn, containing an alpha amylase expression trait. A total of 384 English crossbred steers having an average weight of 538 lb and originating from Texas were used to determine the effects on performance when fed Enogen Feed corn as either whole shelled or processed as dry-rolled at ad libitum intake.

**Bottom Line**... When fed in an ad libitum fashion to growing calves, Enogen Feed corn improves feed efficiency of growing calves by 5.50%. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact, Dale Blasi (785-532-5427; dblasi@ksu.edu).

**Evaluation of a Medium Chain Fatty Acid-Based Additive for Nursery Pigs** - A total of 350 pigs were used in a 34-d growth trial to evaluate the effects of increasing a medium chain fatty acid (MCFA)-based feed additive in nursery pig diets. Following arrival to the nursery research facility, pigs were randomized to pens (5 pigs per pen) and allowed a 4-d acclimation period. Thereafter, pens of pigs were blocked by body weight (BW) and randomized to one of five dietary treatments (14 pens per treatment). Treatments were constructed such that a dose response was created including 0, 0.5, 1.0, and 2.0% MCFA-based additive as well as a treatment including a 1.0% MCFA blend of C6, C8, and C10 (1:1:1 ratio; Sigma Aldrich, St. Louis, MO). Treatment diets were formulated and manufactured in two dietary phases (d 0 to 13 and 13 to 34). Overall (d 0 to 34), increasing CaptiSURE increased average daily gain (ADG) and average daily feed intake (ADFI). Feed efficiency improved with increasing CaptiSURE up to 1% of the diet with no benefit thereafter. As a result of these linear improvements in ADG, pigs fed 2.0% CaptiSURE were 4 lb heavier than pigs consuming diets without MCFA at d 34. There was no evidence for differences between the pigs fed 1.0% CaptiSURE and the 1.0% MCFA blend of C6, C8, and C10 in phase 1, phase 2, or in overall performance.

**Bottom Line**... In summary, the addition of this MCFA-based additive in nursery pig diets resulted in a linear improvement in ADG and ADFI. Based on these results, this MCFA feed additive appears to result in a similar improvement in growth performance as the C6, C8, and C10 MCFA blend when both are added at 1% of the diet. Additional research is warranted under commercial conditions to determine if similar advantages in growth performance are observed and if they provide an economic return. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by L.L. Thomas, H.E. Williams, J.C. Woodworth, M.D. Tokach, R.D. Goodband, S.S. Dritz, J.M. DeRouchey, and D.J. Mellick)

**Effects of Standardized Ileal Digestible Histidine:Lysine Ratio on Growth Performance of 15- to 25-lb Pigs** - Two experiments were conducted to determine the standardized ileal digestible (SID) His:Lys requirement of 15- to 25-lb nursery pigs. A total of 360 and 350 pigs, initially 15.6 and 14.5 lb body weight (BW), were used in Exp. 1 and 2, respectively. There were 5 pigs per pen and 12 and 10 replicates per treatment in Exp. 1 and 2, respectively. After weaning, pigs were fed a common pelleted diet for 10 d in Exp. 1 and 7 d in Exp. 2. Then, pens were assigned to treatments in a randomized complete block design with BW as the blocking factor. Dietary treatments consisted of SID His:Lys ratios of 24, 28, 32, 36, 40, and 44% in Exp. 1 and 24, 28, 30, 32, 34, 36, and 42% in Exp. 2. Experimental diets were fed in pellet form for 10 d in Exp. 1 and 14 d in Exp. 2 followed by a common mash diet for 15 d in Exp. 1 and 14 d in Exp. 2. Data were analyzed using the GLIMMIX and NLMIXED procedures of SAS. Competing statistical models were quadratic polynomial (QP), broken-line linear (BLL), and broken-line quadratic (BLQ). In Exp. 1, increasing SID His:Lys increased average daily gain (ADG), average daily feed intake (ADFI), and BW and improved feed-to-gain ratio (F/G). In Exp. 2, ADG increased and F/G improved and ADFI linearly increased with increasing SID His:Lys. The best-fitting model for all response variables analyzed was the BLL. In Exp. 1, requirement estimates were 29.7%, 29.1%, and 29.8% SID His:Lys for ADG, ADFI, and gain-to-feed ratio (G:F), respectively. In Exp. 2, the SID His:Lys requirements were estimated at 31.0% for ADG and 28.6% for G:F.

**Bottom Line**... These results suggest that the NRC4 may overestimate the SID His:Lys requirement for 15- to 25-lb pigs. Therefore, nursery diets can be formulated with higher inclusion of crystalline amino acids before His becomes limiting. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by H.S. Cemin, R.M. Karns, C.M. Vier, M.D. Tokach, S.S. Dritz, K.J. Touchette, J.C. Woodworth, J.M. DeRouchey, and R.D. Goodband)
Robert Goodband (goodband@k-state.edu; 785-532-1228)  
Professor/Extension Swine Specialist

Dr. Bob Goodband is originally from Walpole, Massachusetts, and graduated from The Pennsylvania State University in 1984. He obtained his M.S. (1986) and Ph.D. (1989) in Swine Nutrition at Kansas State University, and joined the Department of Animal Sciences and Industry in 1989. Bob’s current university appointment is Teaching (40%), Extension (40%) and Research (20%). He is part of the national and internationally known swine extension/nutrition team with programs focused on developing, evaluating and disseminating the latest information to increase the profitability of pork producers while maintaining the highest level of animal health and welfare. Bob and co-workers have played an important role in developing an intensive on-farm research program that has conducted numerous on-farm trials across the U.S. Bob’s current teaching assignment includes ASI 535, Swine Science and ASI 679, Swine Nutrition. He serves as academic advisor to approximately 40 undergraduate students each year, and has served as the major professor for 15 M.S. and five Ph.D. students. Bob enjoys spending time with his wife, Dani, and son, Brady, on their small farm outside of Randolph, KS.

Jennifer Bormann (jbormann@k-state.edu; 785-532-1222)  
Associate Professor/Graduate Program Director

Originally from Muscatine, Iowa, Dr. Jennifer Minick Bormann grew up with Shorthorn cattle and horses. She earned a B.S. in Animal Science from Iowa State University in 1997, an M.S. in Animal Science from Oklahoma State University in 1999, and a Ph.D. in Animal Breeding and Genetics from Iowa State University in 2004. She joined the faculty at Kansas State University in 2004 with a 75% teaching and 25% research appointment. Dr. Bormann specializes in beef breeding and genetics and has worked on a number of projects, including collaborations with the NCBA and the American Angus Association. Currently, she teaches Genetics, Animal Breeding Principles, Advanced Animal Breeding, Equine Genetics and Introductory Horse Lab, and advises undergraduate students. She also is the head advisor for the KSU Pre-Vet Club.

Dr. Bormann, her husband, Dale, daughter, Kate, and son, Luke, reside south of Manhattan with their horses and dogs.
Manage calving pens and pastures to minimize human, cow and calf stress. Stay organized.

An observation schedule should be implemented for calving first-calf heifers and cows. First-calf heifers should be checked every two to three hours.

Sanitation is key to reducing and/or eliminating calf scours. An excellent calving pasture management plan by Dr. David Smith from the University of Nebraska - Lincoln, can be found at https://beef.unl.edu/a95e3e40-93f8-4893-a296-d706fb4aec9a.pdf.

Make sure every calf consumes adequate colostrum during the first four to 12 hours after birth.

Keep accurate calving records, including cow identification (ID), calf ID, birth date, calving difficulty score and birth weight. Other traits to consider recording are teat and udder scores, calf vigor score, and other pertinent information. This information along with Angus sire information is vital for enrolling cattle into the AngusSourceSM program.

Calving books are essential sources of information; make sure you have a backup copy.

Body condition score (BCS) cows. Thin and young cows will need extra energy to maintain yearly calving interval.

If cow diets are going to be shifted from low- (poor quality forage or dormant grass) to high-quality forage (lush green grass) programs, begin a grass tetany prevention program at least three weeks prior to the forage switch.

Given the high price of mineral supplements, conduct a needs assessment of your cow herd. Moreover, closely monitor daily intake to insure that it is consistent with label directions.

When making genetic selections, use the most recent National Cattle Evaluation (NCE) and herd records judiciously.

If new bulls are purchased, now is the time to start preparing them for their first breeding season. Bulls need to be properly vaccinated and conditioned to be athletic. Moderate body condition with abundant exercise is ideal.

After calving and before breeding, vaccinate cows as recommended by your veterinarian.

Plan to attend beef production meetings.